

CHAPTER THREE – INDOOR WATER USE

Largest Uses

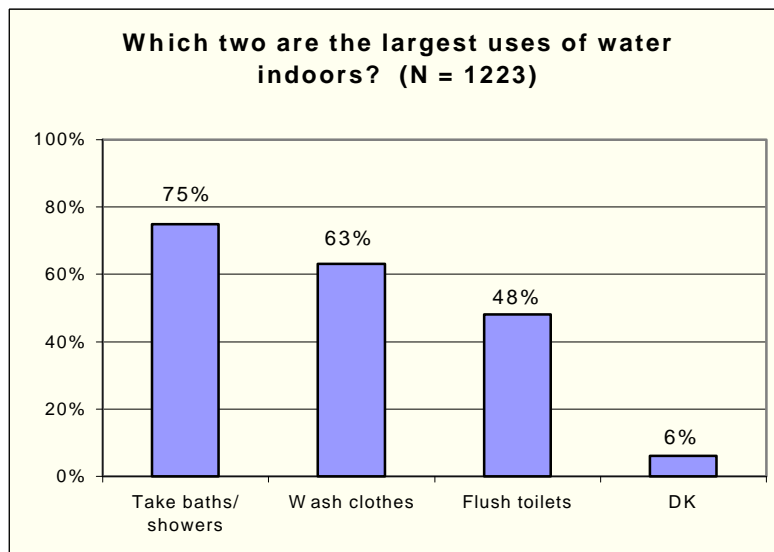
Q11. Inside their homes, people mostly use water to wash their clothes, take baths and showers, and flush toilets. Of these three ways to use water, which two do you think are the largest uses in your home?

Respondents were asked to choose which of three uses – washing clothes, taking baths and showers, or flushing toilets – were the two largest uses of water in their homes. As shown in **Figure 8**, customers are most likely to believe “taking baths or showers” (75%) and “washing clothes” (63%) are the two largest uses of water indoors.

Based upon SPU’s metering in single family homes, toilets use the greatest amount of water, while showers and baths (combined) and clothes washing use a nearly equal amount. (Note: Since multi-family homes often don’t have clothes washers, and this study included multi-family homes, clothes washing would likely be a more clear “third place” if all household types were metered.) Thus, there is significant opportunity to improve customer knowledge about what indoor uses are the largest. Seattle customers were significantly more likely than Purveyor customers to select “flushing toilets” as one of the top two uses, but still selected baths and showers and clothes washing more often.

Table 8 shows that while the proportions choosing “baths and showers” and “flushing toilets” remained about the same between 1994 and 1999, those choosing “washing” clothes appeared to go up sharply. Although the two questions were phrased somewhat differently, another reason for the rise could be a recent regional emphasis on promoting resource efficient washers and little emphasis upon toilets as a high consumer of water.

Figure 8 - Two Largest Uses of Water Indoors (Q11)



Regional Comparison-largest use <i>Sig. = <.05</i>	Seattle %	Purveyor %
Take baths/showers	75	75
Wash clothes	59	66
Flush toilets	52	45
DK	4	7
N=	603	620

Table 8 - Two Largest Uses of Water Indoors (Q11)

Comparison	1994 Survey %	1999 Survey %
Taking baths and showers	76	73
Washing clothes	49	66
Flushing toilets	48	46
Other	3	NA
Don't know	3	6
N=	2452	959

Showerheads and Showers

Q12: In 1992, your household should have received a low-flow showerhead from your water utility. Was this showerhead installed in your home?

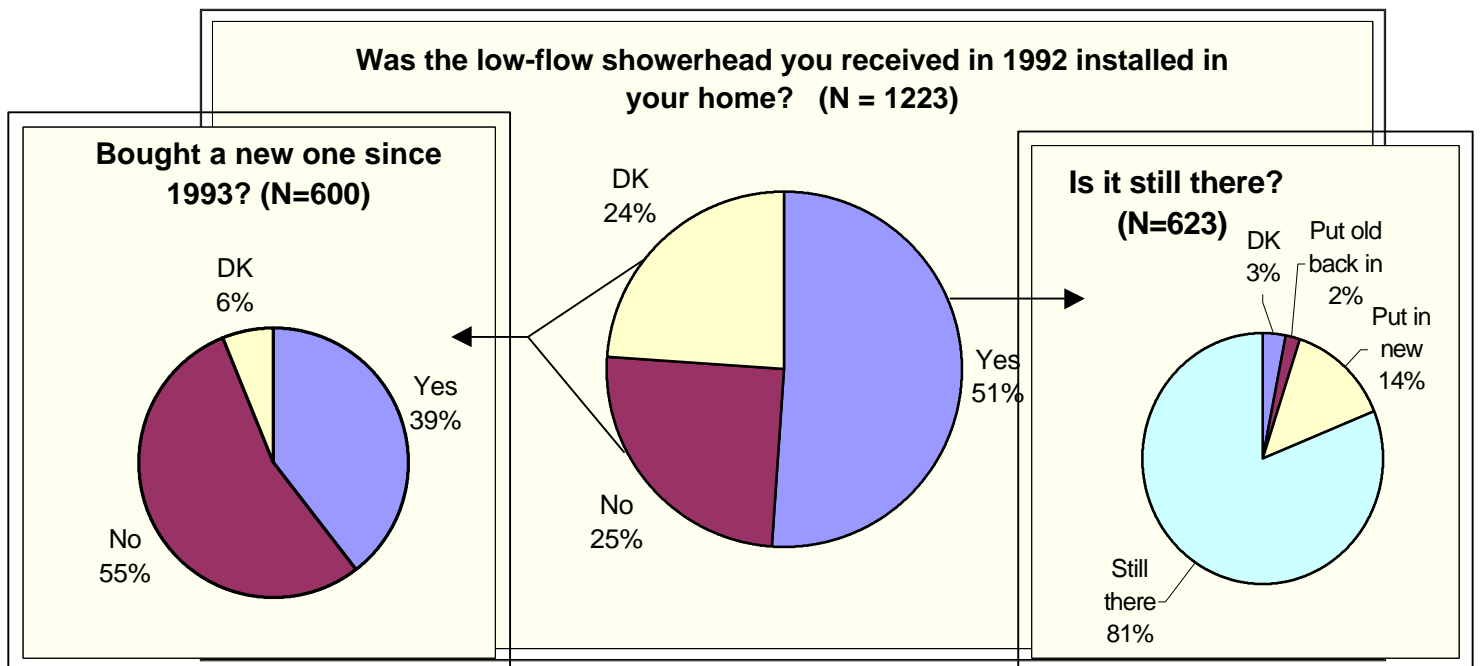
Q13: Is it still there, did you put your old showerhead back in, or did you replace it with a new showerhead at a later date?

Q14: Have you installed a new showerhead in your home since 1993?

When asked if they had installed the low-flow showerhead they received from their utility in 1992, just over half (51%) of all respondents said yes, while 25% said no and 24% didn't know. Using the data in **Figure 9**, we can conclude:

- 67% of households are using low-flow showerheads: 41% are still using the original low-flow showerhead provided by their utility (41%), and 26% have installed a new low-flow showerhead since 1992 (when regulations went into effect requiring them).
- 33% of households don't have (27%) or don't know if they have (6%) low-flow showerheads.

Figure 9 - Use of Low-flow Showerheads in Home (Q12-14)



Some differences do exist between Seattle and Purveyor customers. Of most note is that more Purveyor than Seattle customers have bought and installed new showerheads on their own since 1993 – 44% compared to 34%. The 67% overall figure of all households having low-flow showerheads is consistent with the 70% figure of single family households in 1994 that reported they installed the utility-provided low-flow showerheads.

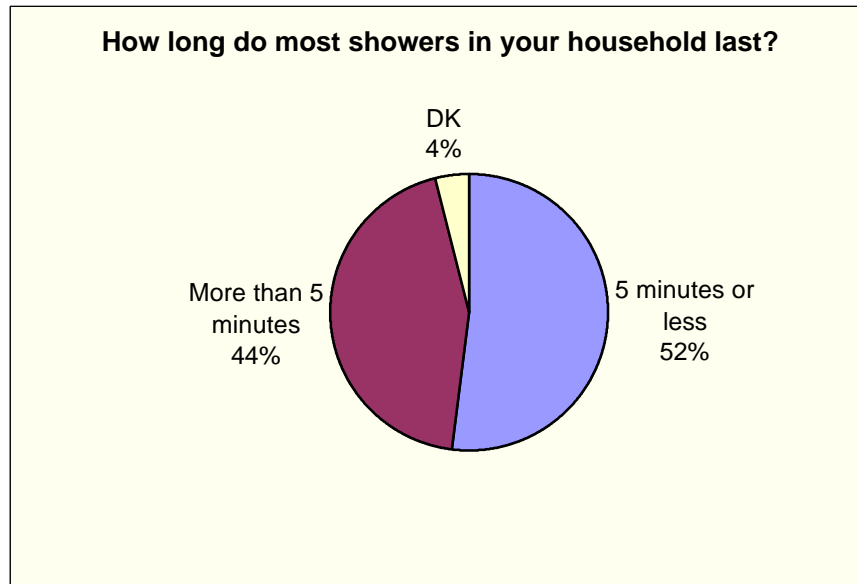
Regional Comparison-Showerhead Installed? Sig. = <.05	Seattle %	Purveyor %
Yes	50	52
No	22	27
DK	28	21
N=	603	620

Regional Comparison- Still There? N.S.	Seattle %	Purveyor %
Yes, still there	82	81
Put in new one	15	13
Put old one back in	1	2
DK	3	4
N=	301	321

Regional Comparison- Installed New One Since 1993? Sig. = <.05	Seattle %	Purveyor %
Yes	34	44
No	58	51
DK	8	5
N=	302	299

Q15: Do most showers in your household last 5 minutes or less, or do they last more than five minutes?

All respondents were asked how long most showers in their household lasted -- either 5 minutes or less or more than 5 minutes. As shown in **Figure 10** below, just over half of respondents (52%) said their showers lasted 5 minutes or less, while 44% said they lasted more than 5 minutes, and 4% said they don't know. Although the differences between Seattle and Purveyor customers are small, the statistics show that Seattle customers are significantly more likely to take shorter showers.

Figure 10 - Length of Most Showers (Q15)

Regional Comparison- Length of most showers <i>Sig. = <..05</i>	Seattle %	Purveyor %
5 min or less	54	51
More than 5 min.	40	47
DK	6	3
N=	603	620

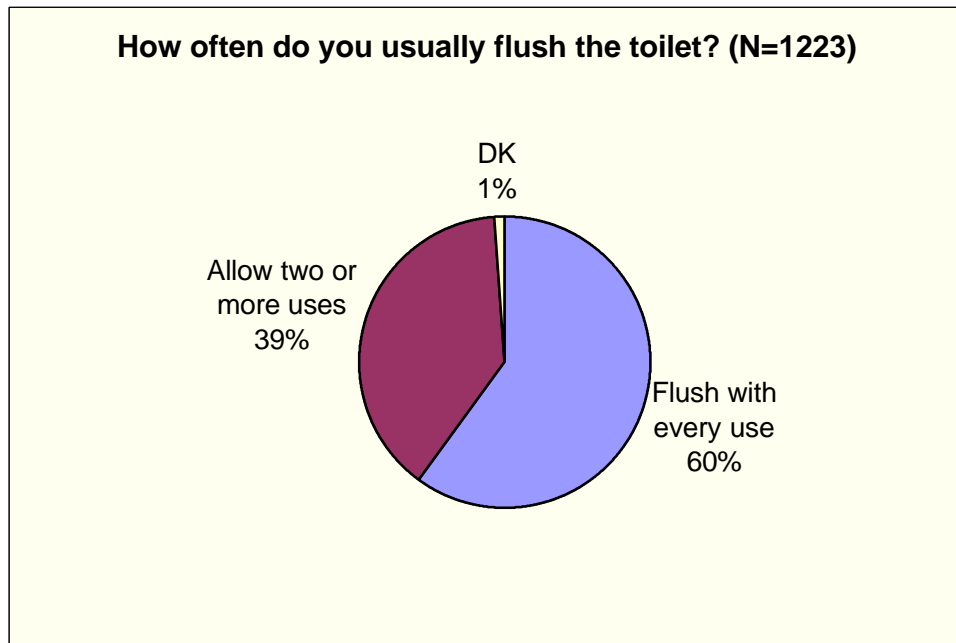
Toilets

Q16. Do you usually flush the toilet with every use, or do you often allow two or more uses before flushing?

Q17. How many toilets do you have in your home?

Q18. In the past year, have you checked any of your toilets for leaks?

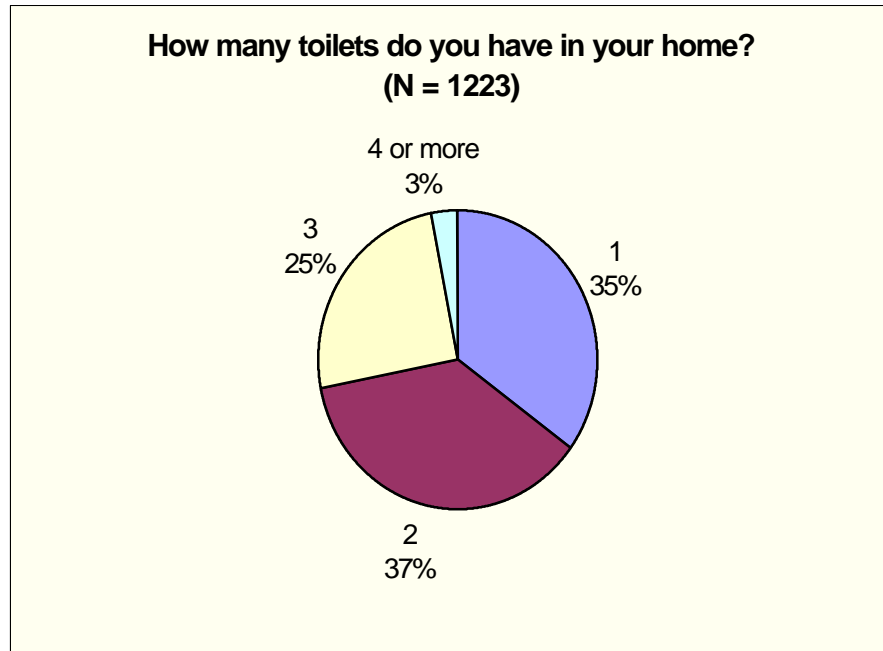
Respondents were asked a series of questions about their household toilets. When asked if they either usually flush the toilet with every use or allow multiple uses before flushing, the majority of respondents (60%) said they flush with every use (see **Figure 11**). Still, 39% do allow two or more uses before flushing. Seattle customers are much more likely than Purveyor customers to allow two or more uses before they flush (46% vs. 32%)

Figure 11 - How Often Toilet Is Flushed (Q16)

Regional Comparison- How Often Flush? <i>Sig. = <.05</i>	Seattle %	Purveyor %
Every use	52	67
2 or more uses	46	32
DK	2	1
N=	603	620

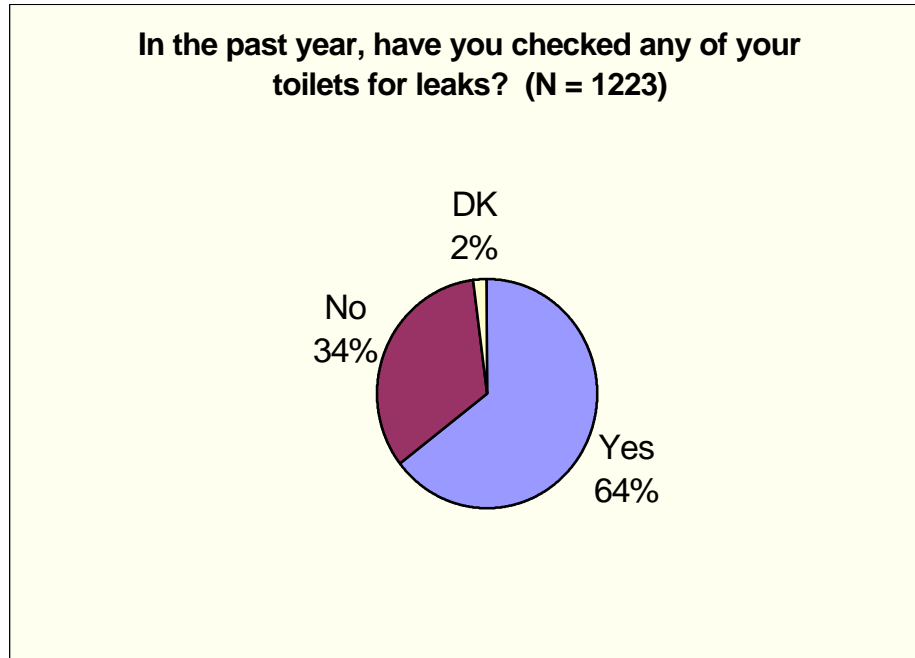
As shown in **Figure 12**, just over one third (35%) of all respondents have only one toilet in their home. Another 37% have 2 toilets, 25% have 3 toilets, and 3% have 4 or more toilets. Significant differences appear between Seattle and Purveyor samples. Many more Seattle homes than Purveyor homes have only one toilet (46% vs. 26%). And, many more Purveyor than Seattle homes have three toilets (33% vs. 16%). 37% of respondents in both groups have two toilets.

Figure 12 - Number of Toilets in the Home (Q17)



Regional Comparison- How Many Toilets = <.05	Sig.	Seattle %	Purveyor %
1 toilet		46	26
2 toilets		37	37
3 toilets		16	33
4 toilets		2	4
	N=	603	620

A majority of respondents (64%) report they have checked their toilets for leaks in the past year, as shown in **Figure 13**, but about one third (34%) said they had not and 2% didn't know. Significantly more Purveyor than Seattle customers report they have checked their toilets for leaks (71% to 57%). The proportion of households checking for leaks in the last year has declined from 79% in 1994 to 68% in 1999.

Figure 13 - Toilets Checked For Leaks (Q18)

Regional Comparison- Toilets Checked for Leaks <i>Sig. = <.05</i>	Seattle %	Purveyor %
Yes	57	71
No	40	28
DK	2	1
<i>N=</i>	<i>603</i>	<i>620</i>

Table 9 - Checked toilet for leaks? (Q18)

Over Time Comparison – Toilets Checked for Leaks?	1994 Survey %	1999 Survey %
Yes	79	68
No	21	30
Don't know	-	1
<i>N=</i>	<i>2505</i>	<i>959</i>

Q19. How many toilets have you replaced or installed new in the past 7 years – that is, since 1993?

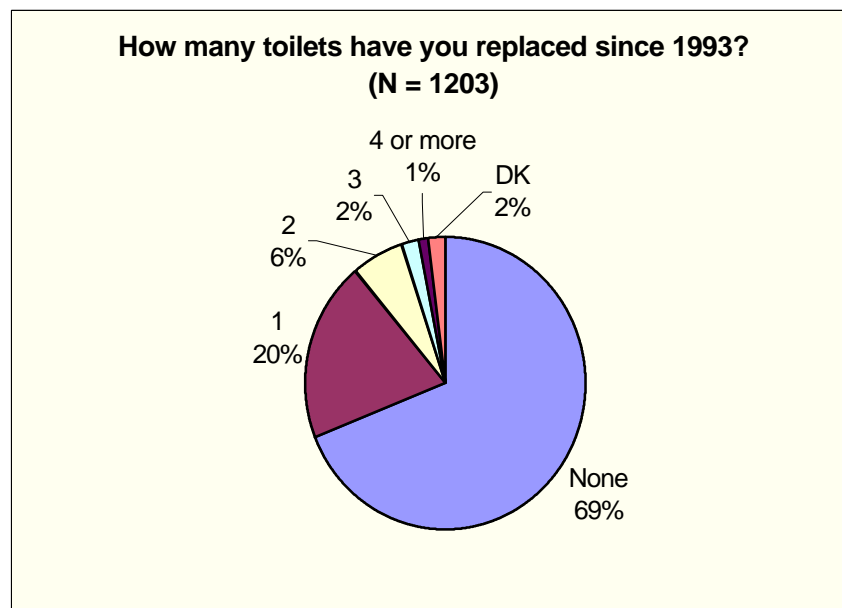
Q20. How satisfied are you with the new toilet?

Q21. Within the next two years, how likely will you be to replace any toilet in your home that is in good working order?

Q22. Will you replace this toilet because you plan to remodel, because you'd like to save water, because you'd like to save money on your water and sewer bill, or for some other reason?

Respondents were asked how many toilets they had replaced or installed new in the past 7 years (since 1993, when the regulations were changed). As shown in **Figure 14**, 29% said they had replaced between 1 and 4 of their toilets in the past seven years, whereas 69% had not replaced any, and 2% didn't know.

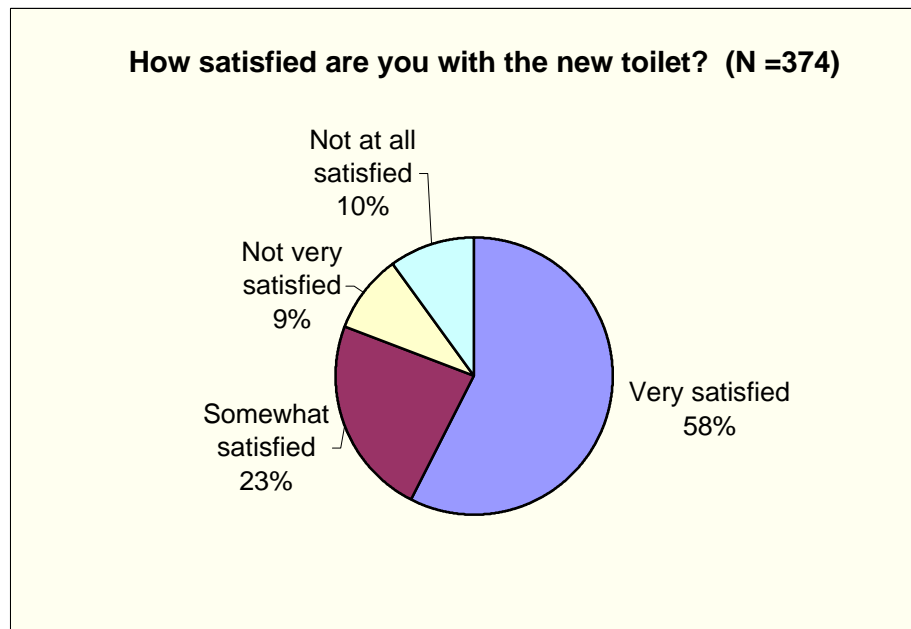
Figure 14 - Number of Toilets Replaced Since 1993 (Q19)



Regional Comparison – Toilets Replaced Since 1993 N.S.	Seattle %	Purveyor %
None	68	70
1	21	19
2	7	6
3	2	2
4	1	1
N=	588	614

Those respondents who had replaced any toilets since 1993 (N=374) were then asked how satisfied they were with the new toilet. As shown in **Figure 15**, most customers (81%) were either very (58%) or somewhat (23%) satisfied with the new toilet. The remaining 19% were either not very (9%) or not at all (10%) satisfied.

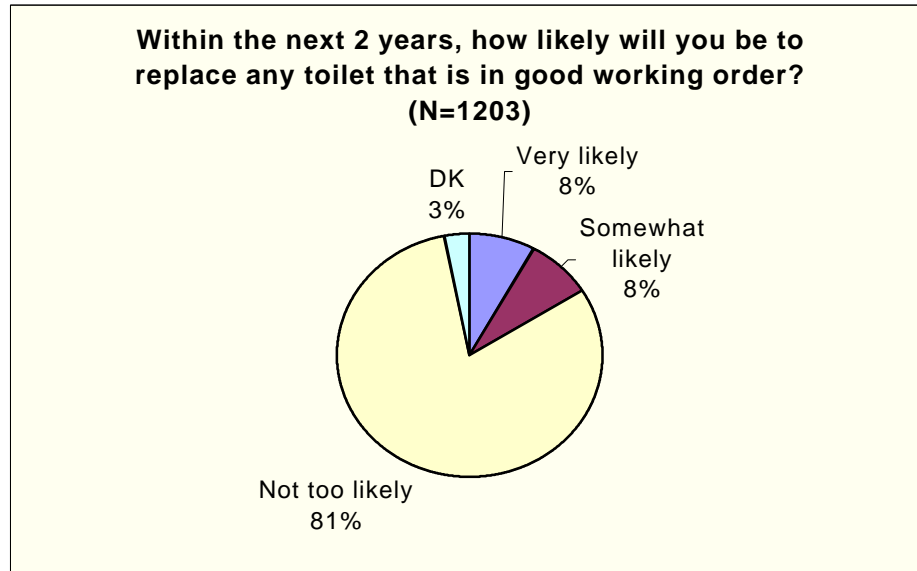
Figure 15 - How Satisfied With New Toilet (Q20)



Regional Comparison—How Satisfied with New Toilet N.S.	Seattle %	Purveyor %
Very	57	57
Somewhat	26	20
Not very	5	12
Not at all	11	10
DK	0	1
N=	189	186

Respondents were asked how likely they would be to replace any toilet in their home within the next two years that was in good working order. As shown in **Figure 16**, most respondents (81%) said they were not likely to replace a working toilet. However, 8% said they were very likely and 8% said they were somewhat likely to replace a toilet in good working order within two years. (Note: these would be “voluntary” replacements, not replacements of malfunctioning toilets.)

Figure 16 - Likelihood of Replacing Good Working Order Toilet (Q21)



Regional Comparison- How Likely to Replace Toilet In Next 2 Years N.S.	Seattle %	Purveyor %
Very	7	8
Somewhat	8	7
Not too	80	82
DK	5	2
N=	189	186

Respondents who were likely to replace a toilet in the next two years (16% of the population) were then asked if they planned to change their toilet because they wanted to remodel, wanted to save water, wanted to save money on their bill, or for some other reason? As shown in **Table 10**, just over half (51%) of this group said they planned to remodel. Nearly a quarter (24%) said it was to save on water use, and 12% said it was to save money on their water bill.

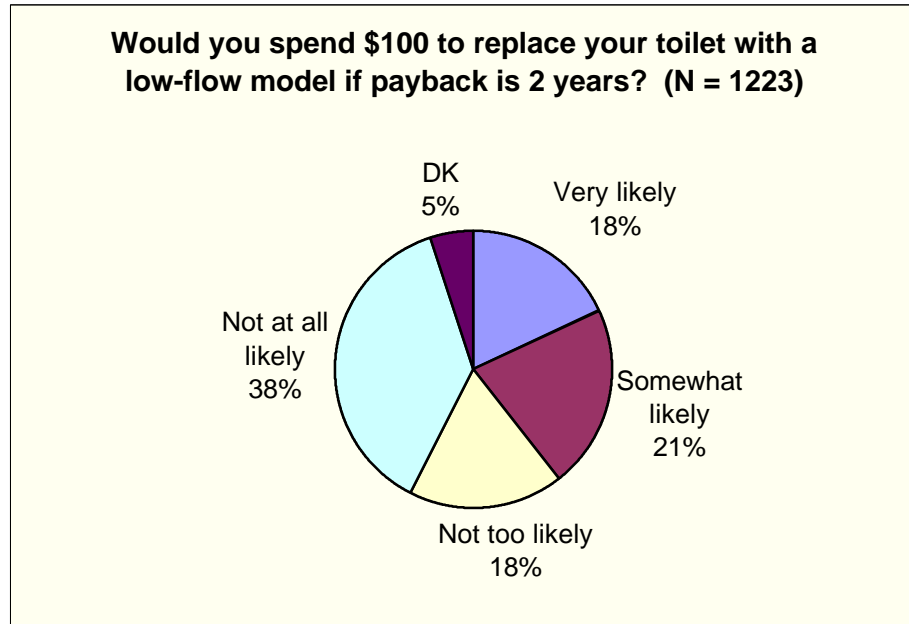
Table 10 - Reasons to Replace Toilet in the Next Two Years (Q22)

Reason	Population %
Remodeling/Updating	51
To save on water use	24
To save money	12
Broken/Leaks/Needs replacing	4
Other*	4
Don't know	4
<i>(asked of respondents in Q21 who are very or somewhat likely to replace their toilet) N=</i>	183
* Other reasons include "doesn't like low-flow model," "to save both money and water," and "buying new home."	

Q23. How likely would you be to spend about \$100 to replace a working toilet in your home with a new low-flow, 1.6 gallon per flush model, if you could recover your cost through lower water and sewer bills in less than 2 years?

When all respondents were asked if they would spend \$100 to replace a working toilet with a new low-flow model if they could recover the cost in less than 2 years, 39% said they would be very (18%) or somewhat (21%) likely to replace a toilet (see **Figure 17**). This proposition more than doubled the number of households interested in changing to a new (low-flow) toilet.

Seattle respondents were more likely than Purveyor respondents to want to replace their toilets with a low-flow model for \$100.00 and a 2-year payback: 45% of Seattle respondents versus 35% of Purveyor respondents.

Figure 17 - How Likely to Replace Toilet With Low-Flow Model (Q23)

Comparison – How Likely to Replace Toilet With Low-Flow Model <i>Sig. = <.05</i>	Seattle %	Purveyor %
Very	22	15
Somewhat	23	20
Not too*	49	60
DK	6	4
* “not too” and “not at all” combined	603	620

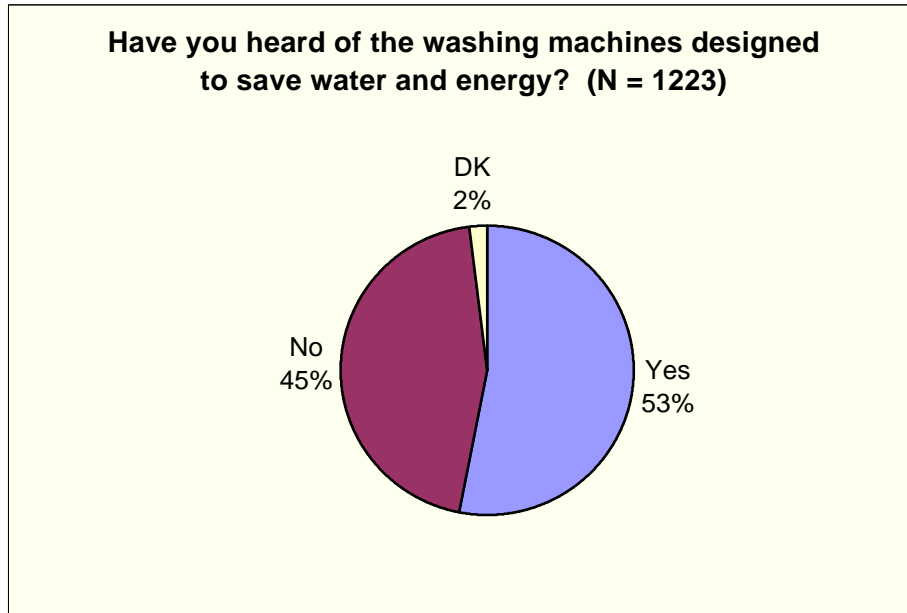
Washing Machines

Q24: Have you ever heard of tumble action or horizontal-axis washing machines that are designed to save water and energy?

The final question to respondents on indoor water used revealed that a little over half (53%) of all respondents said they had heard of resource efficient horizontal-axis washing machines that are usually loaded from the front instead of from the top. As shown in **Figure 18** below, 45% said they had not heard of these water- and energy-

saving washing machines and 2% didn't know. No differences surfaced between Seattle and Purveyor customers.

Figure 18 - Knowledge of Water- and Energy-Saving Washing Machines (Q24)



Comparison – Heard of Horizontal Axis Washer? <i>N.S.</i>	Seattle %	Purveyor %
Yes	55	52
No	43	47
DK	2	1
* “not too” and “not at all” combined	603	620